

REMARKS/ARGUMENTS

Claims 1, 3-10 and 20-23 are active.

Claim 1 is amended to incorporate previously presented and examined Claim 2 and to further define the coating from the specification in the paragraph bridging pages 7-8.

The remaining changes are for dependency and for clarity.

No new matter is added.

Applicants thank Examiner Coleman and Examiner Kornakov for the courtesy of discussing this case with their undersigned representative on May 3, 2011. During this discussion, differences between the invention and the cited art were discussed as well as amendments to the claims, like those submitted in this paper. Further expansion on these points in the context of the rejections of record are provided below.

In the Official Action, the Examiner has withdrawn the previous rejections but has raised new rejections under 35 USC 103(a) based primarily on the combination of the previously cited Thomsen '761 and Thomsen '198 publications with newly cited Veerasamy (US 2002/0012798). The Examiner's rejection alleges that Thomsen '761 teaches a cleaning process with an ion beam (see paragraphs [0033], [0036], and [0037]) and while Thomsen '761 does not teach the gas as predominantly oxygen, relies on Thomsen '198 (teaching a mixture including oxygen) and Veerasamy (using oxygen to clean a glass substrate).

Thomsen 761 relates to depositing a DLC layer using an ionic source. Further, Thomsen 761 relates to processes in an argon atmosphere. (See, par. [0038]). The drawbacks and deficiencies of such processes are detailed at pages 4-5 of the present specification, including contaminants during sputtering, formation of insulation/barrier layers, and/or alteration of the chemical make up of the uppermost surface.

The combination of Thomsen '761, Thomsen '198 and Veerasamy '798 do not render the claimed method obvious because the claims require the application of a coating (e.g. ,a

solar control coating) on the surface portion of the glass substrate that has been cleaned, i.e., see Claim 1 subjecting to plasma to at least partially eliminate soiling matter as Thomsen '761 clearly teaches cleaning the bottom surface of the substrate opposite to where the solar control coating is to be applied (see FIG. 2) and the cleaning suggested in Thomsen '761 is for the DLC coating (as apparent from paragraph [33] and FIG 2.

Thomsen 198 primarily relates to using ionic sources for “milling” the substrate. It does not enable one of ordinary skill in the art to clean a substrate without removing material from the substrate as required by the present invention. Further, Thomsen 198 does not teach or suggest using a gas mixture comprising predominantly oxygen and substantially no argon. In fact, Thomsen 198 actually teaches away from such gaseous mixtures, leading one of ordinary skill in the art to use mixtures having substantial amounts of both oxygen and argon. For example, in pars. [0045] and [0054], Thomsen 198 indicates that oxygen and argon are complimentary and must be used together, indicating that argon ions “mill” the substrate. Thus, Thomsen 198 indicates that argon should be used to “mill” the surface, necessarily meaning that it cannot teach or suggest processes in which argon is substantially absent and no such milling (or material removal) occurs. Nowhere does Thomsen 198 teach or suggest that oxygen could be used with little or no argon, or that “cleaning” should occur without milling. On the basis of this line of argument, the modification of such gas by Veerasamy '798 is improper.

Moreover, par. [0045] of Thomsen 198 makes clear that those processes are run in diffuse mode. In contrast, the invention methods are run in collimated mode. Indeed, the present invention relates in part to the discovery that when cleaning processes without removal of material occurs, a collimated beam is necessary. (See, for example, pages 13 and 14 of the present specification, particularly the top of page 14).

During the aforementioned interview, the Examiners asserted that cleaning (in addition to deposition of DLC layer) is also suggested in both Thomsen publications, and Thomsen 198 in paragraph [0045] also suggests the possibility of using collimated beam (even though diffuse mode is clearly preferred). While Applicants acknowledge that coating is also suggested e.g., in Thomsen '761 and the Examiner's interpretation (during the interview) at least paragraph [0032] and FIG. 2 to include coating without breaking vacuum because in his view it is shown that this occurs in the same device under "low pressure". Even so, it is clear that Thomsen '761 teaches cleaning the bottom surface of the substrate opposite to where the solar control coating is to be applied (see FIG. 2) and the cleaning suggested in Thomsen '761 is for the DLC coating (as apparent from paragraph [33] and FIG 2. Veerasamy's teachings are silent in this regard and as a result the combination of cited art do not teach or suggest the claimed method.

The rejection adding Criss to the combined teachings of Thomsen '761, '198 and Veerasamy is unsustainable as the rejection posits that the use of cathode sputtering was known (see page 8 of the Action). However, it is clear that Thomsen '761 teaches cleaning the bottom surface of the substrate opposite to where the solar control coating is to be applied (see FIG. 2) and the cleaning suggested in Thomsen '761 is for the DLC coating (as apparent from paragraph [33] and FIG 2. Veerasamy and Criss's teachings are silent in this regard and as a result the combination of cited art do not teach or suggest the claimed method.

The rejection adding Hartig to the combined teachings of Thomsen '761, '198 and Veerasamy is unsustainable as the rejection posits that the use of CVD was known (see page 9 of the Action). However, it is clear that Thomsen '761 teaches cleaning the bottom surface of the substrate opposite to where the solar control coating is to be applied (see FIG. 2) and

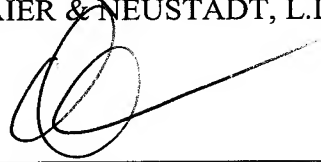
the cleaning suggested in Thomsen '761 is for the DLC coating (as apparent from paragraph [33] and FIG 2. Veerasamy and Hartig's teachings are silent in this regard and as a result the combination of cited art do not teach or suggest the claimed method.

Reconsideration and withdrawal of the rejections is requested.

Applicants believe that the present application is in condition for allowance. Prompt and favorable consideration is requested.

Respectfully submitted,

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